

Abstract

A digitally aberration corrected miniaturized holographic Fourier transform spectrometer (HFTS) made from simple optical components and with no moving parts is provided. The disclosed digitally aberration corrected HFTS is comprised of a two beam interferometer, which provides two interfering beams; a 2D array detector to detect the interference pattern created by the beams; a computer for correcting effects of aberrations in the pattern and calculating the spectrum from thus corrected interferogram.